EPA Region 1 Potential PFC Source Mapping Protocol

Mission:
Identify potential sources of perfluorinated compounds (PFCs) to public drinking water systems in Region 1.

Goals:

- Identify potential PFC sources in Region 1
- Determine distance of potential PFC sources from public drinking water systems
- Prioritize potential PFC sources
- Identify data gaps and uncertainties where additional research is needed

Project approach

1. Identify potential PFC sources
    a. Airports (217)
    b. State fire training academies (9)
    c. Industrial facilities (274)
        i. NAICS code 325211 - plastics material and resin manufacturing
        ii. NAICS code 332812 - metal coating and engraving (except jewelry and silverware)
        iii. SIC code 28210213 - polytetrafluoroethylene resins and Teflon manufacturing
    d. Other identified industrial facilities: Saint Gobain Facilities (11), Warren Wire facility (1)
    e. Facilities that submitted EPCRA Tier II forms for storage of at least 10,000 pounds of PFCs (18)

2. Prioritization of potential PFC sources
    a. Airports - high priority
    b. State fire training academies - high priority
    c. EPCRA Tier II facilities - high priority
    d. Industrial facilities
        i. High priority - company website explicitly describes use of PFC compounds, or products known to be made with PFC compounds, such as Teflon, Gortex, Kevlar, etc., in production operations conducted at specific facility
        ii. Medium priority- company website describes production operations that may use PFC compounds, but does not explicitly reference use of PFC compounds at specific facility
        iii. Low priority – company website describes production operations that may use PFC compounds, but there was not enough information to confirm that such production operations occurred at specific facility
        iv. Lowest priority – company website did not include any

information to suggest that the company was currently using PFC compounds

e. Saint Gobain facilities
    i. High priority – performance plastics and high performance glass facilities
    ii. Medium priority – all other facilities

3. GIS Mapping
    a. Distance of potential PFC sources to public drinking water systems - mapping of ¼ mile, ½ mile and 1 mile buffers from potential sources
    b. UCMR3 analysis – identified all systems that monitored for PFCs

4. Communicated with EPA Regions 2 and 3
    a. Shared issues and approaches
    b. Changed distance from public drinking water supply wells to one mile based on approach of Region 2 and 3

5. Potential data gaps and uncertainties
    a. Private drinking water wells
    b. Research methodology for potential PFC sources
        i. Limitations of NAICS codes
        ii. Other potential PFC uses/sources include - landfills, recycling facilities, wastewater treatment plant sludge, refineries, large rail yards, cosmetics, textiles and leather products, carpets and domestic furniture treatment, paper and packaging products (e.g., food wrappers), cleaning products, electrical wire casings, fire- and chemical-resistant tubing, plumbing seal tape, metal plating operations, photography, photolithography, semiconductors, oil and mining, electronics, aviation hydraulic fluids, pesticides, and medical devices
    c. Historical sources (such as historic chrome plating operations using PFCs for fume suppression)
    d. Prioritization of potential PFC sources
        i. Assumptions and data limitations
    e. Hydrological fate and transport considerations